

In The Claims:

1. (CURRENTLY AMENDED) A method of viewing the flame produced by a burner in a pyrolysis section of a petroleum cracker furnace, wherein the fuel burnt by the burner is natural gas, comprising viewing the flame through an interference filter adapted to pass light of the wavelength of sodium only.
2. (CANCELED).
3. (PREVIOUSLY PRESENTED) A method as claimed in claim 1, wherein the fuel burnt by the burner is a mixture of hydrogen, methane and air.
4. (PREVIOUSLY PRESENTED) A method as claimed in claim 1, wherein a window is provided in the wall of the furnace through which the burner flame can be viewed.
5. (ORIGINAL) A method as claimed in claim 4, wherein the window is made of quartz.
6. (PREVIOUSLY PRESENTED) A method as claimed in claim 4, wherein the interference filter is provided as a panel attached to the window of the furnace.
7. (ORIGINAL) A method as claimed in claim 6, wherein the panel is hinged to the furnace so it can be placed over the window or removed by a user as required.
8. (PREVIOUSLY PRESENTED) A method as claimed in claim 1, wherein a pair of glasses or goggles having an interference filter in each lens thereof is provided.

9. (PREVIOUSLY PRESENTED) A method as claimed in claim 1, wherein the interference filter is provided in a camera arranged inside the furnace and adapted to photograph the burner at regular intervals.
10. (ORIGINAL) A method as claimed in claim 9, wherein the information from the camera is relayed to an operator who makes any necessary adjustments to the burner from a remote location.
11. (PREVIOUSLY PRESENTED) A method as claimed in claim 9, wherein the camera is programmed to photograph the burner about once every 10 minutes.
12. (PREVIOUSLY PRESENTED) A method as claimed in claim 9, wherein the camera is programmed to move along a row of burners and to photograph groups of one or more burner flames in turn.
13. (CURRENTLY AMENDED) An apparatus comprising a furnace, a burner for burning natural gas in the pyrolysis section of a petroleum cracker furnace and an apparatus for viewing the flame produced by the burner, the apparatus for viewing the flame comprising an interference filter adapted to pass light of the wavelength of sodium only.
14. (ORIGINAL) An apparatus as claimed in claim 13, wherein a window is provided in the wall of the furnace through which the burner flame can be viewed.
15. (ORIGINAL) An apparatus as claimed in claim 14, wherein the window is made of quartz.

16. (PREVIOUSLY PRESENTED) An apparatus as claimed in claim 14, wherein the interference filter is provided as a panel attached to the window of the furnace.
17. (PREVIOUSLY PRESENTED) An apparatus as claimed in claim 14, wherein the filter is a panel which can be placed over the window or removed by a user as required.
18. (PREVIOUSLY PRESENTED) An apparatus as claimed in claim 13, wherein the apparatus for viewing the flame comprises a pair of glasses or goggles comprising an interference filter in each lens thereof.
19. (PREVIOUSLY PRESENTED) An apparatus as claimed in claim 13, wherein the apparatus for viewing the flame comprises a camera in which an interference filter is provided, wherein the camera is arranged inside the furnace and adapted to photograph the burner flame at regular intervals.
20. (ORIGINAL) An apparatus as claimed in claim 19, comprising means for relaying the information from the camera to an operator and means for making any necessary adjustments to the burner from a remote location.
21. (PREVIOUSLY PRESENTED) An apparatus as claimed in claim 19, wherein the camera is programmed to photograph the burner about once every 10 minutes.
22. (PREVIOUSLY PRESENTED) An apparatus as claimed in claim 19, wherein the camera is programmed to move along a row of burners and to photograph groups of one or more burner flames in turn.
23. (CURRENTLY AMENDED) A pyrolysis section of a petroleum cracker furnace comprising a burner for burning natural gas housed within

the walls thereof and a window provided in a wall of the pyrolysis section of a petroleum cracker furnace, wherein an interference filter adapted to pass light of the wavelength of sodium only is provided in or on the window.

24. (CURRENTLY AMENDED) Glasses for viewing a flame produced in a pyrolysis section of a petroleum cracker comprising an interference filter provided in each lens thereof, wherein the interference filter is adapted to pass light of the wavelength of sodium only.